The impact of swallowing skill training protocol in patients with ALS

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Swallowing is often impacted for individuals with Motor Neuron Disease (MND/ALS), leading to difficulties with eating and drinking. This study investigated a new type of swallowing therapy using the Biofeedback in Strength and Skill Training (BiSSkiT) protocol. This biofeedback provides patients with a focus for executing effortful type swallowing manoeuvres as it provides direct information regarding relative 'strength', or activity in the floor of mouth muscles. This has been found to correlate highly with anterior hyoid movement. This technology allowed participants to visualise their swallowing and learn to control the strength and timing of their swallow.

The research consisted of two studies. The first included five individuals at different stages of progression of MND. This investigated if the treatment was a safe approach for people with MND, and confirmed it was. Following this, a larger study of 19 individuals with ALS/PLS forms of MND was completed. Treatment was daily for two weeks. Participants needed to have an EAT-10 (Swallow screen) score >3 and oral intake as their primary source of nutrition. There were 22 different outcomes investigated including videofluoroscopic swallow study, ultrasound, swallowing quality of life questionnaire, timed water swallow test and test of masticating and swallowing solids.

Improvement was noted in two of these measures which were of particularly importance; 1. quality of life and 2. the degree of movement of the hyoid bone, which protects the airway from food and drink going towards the lungs. The Oropharyngeal transit time also decreased slightly but there was no change in the other outcome measures.

The results from this study do not provide conclusive evidence that the therapy used was beneficial. However, the changes that were observed demonstrate that there may be potential benefits and more research with a larger group of individuals with MND over a longer period of time would be beneficial.